**MOLECULAR MODELS ACTIVITY**

**Read the instruction guide** in the modelling kit.

In the instruction diagrams covalent bonds are shown with a solid line and ionic bonds with a dashed line.

For **single** covalent bonds use the short grey bonds. For **double** covalent bonds use the long grey bonds. For ionic bonds use the short purple bonds.

All holes must be filled with bonds.

All metal ions are represented with grey spheres.

Each student must build each molecule. Use the correct colour pencil crayon for each colour atom.

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| --- | --- | --- | --- | --- |
| Molecular  Formula | Name of  Molecule | Number and Name  of Each Atom | Ball and Stick  Model Drawing | Structural Diagram |
| H2 | Hydrogen  Gas | 2 - hydrogen |  | H H |
| O2 |  |  |  |  |
| H2O |  |  |  |  |
| NH3  - use blue nitrogen atom with 3 holes |  |  |  |  |
| CO2  - has double bonds |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Molecular  Formula | Name of  Molecule | Number and Name  of Each Atom | Ball and Stick  Model Drawing | Structural Diagram |
| NaCl  - Na is a metal that makes 1 bond  - chlorine is a halogen |  |  |  |  |
| N2 |  |  |  |  |
| CH4 |  |  |  |  |
| C2H4 |  |  |  |  |

Extra Challenges if you have time

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| C2H2 |  |  |  |  |
| CaCl2  - Ca is a metal (grey) that makes 2 bonds |  |  |  |  |
| CH3OH |  |  |  |  |